

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P644365

Luminaire Tested: CRQ4DIP-SR4F0-50D50U835-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644365
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-50D50U835-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

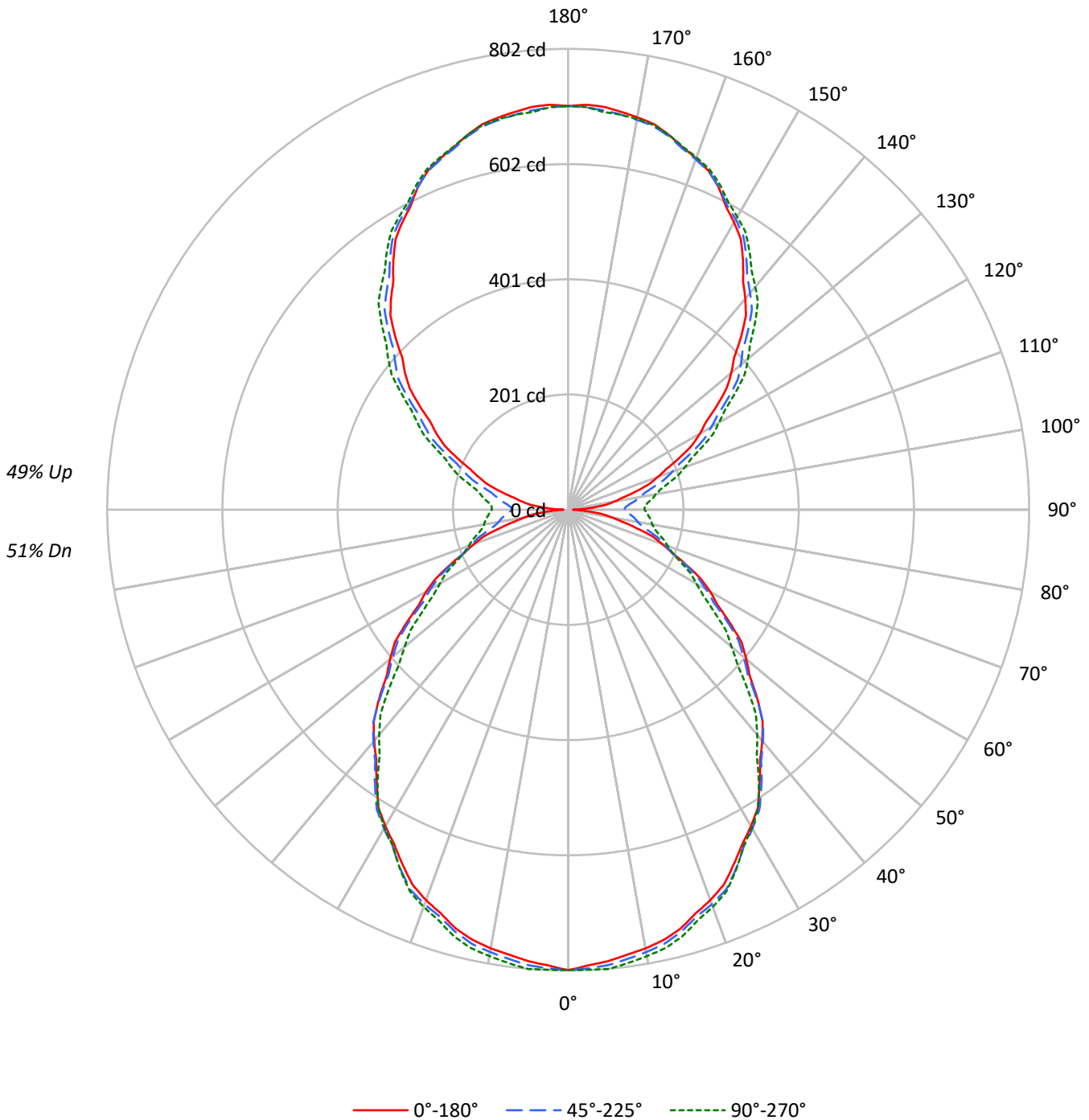
Lumens per Lamp: N/A
Luminaire Lumens: 4140.2 lumens
Efficiency: N/A
Efficacy: 143.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 28.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
RC	80									70									50									30									10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0														
RCR																																						
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51						51														
1	97	93	89	85	90	86	82	79	73	70	67	60	59	57	49	48	47	42						42														
2	89	81	74	69	81	75	69	65	63	59	56	53	50	47	43	41	39	35						35														
3	81	71	64	58	74	66	59	54	56	51	47	47	43	40	38	36	33	29						29														
4	74	63	55	49	68	58	51	46	50	44	40	42	38	34	34	31	29	25						25														
5	68	56	48	42	62	52	45	39	45	39	35	38	33	30	31	28	25	22						22														
6	63	50	42	36	58	47	40	34	40	34	30	34	30	26	28	25	22	19						19														
7	58	46	37	32	53	42	35	30	37	31	27	31	27	23	26	22	20	17						17														
8	54	41	34	28	50	39	32	27	33	28	24	28	24	21	24	20	18	15						15														
9	50	38	30	25	46	35	28	24	31	25	21	26	22	19	22	19	16	14						14														
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	15	13						13														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12936	12936	12936
5°	12692	11423	11067
10°	12525	10172	9561
15°	12341	9110	8363
20°	12059	8173	7315
25°	11683	7290	6373
30°	11313	6457	5532
35°	10811	5688	4749
40°	10344	4967	4025
45°	9803	4270	3359
50°	9231	3631	2756
55°	8626	3052	2260
60°	8048	2517	1863
65°	7335	2054	1557
70°	6649	1674	1338
75°	5815	1403	1200
80°	4862	1223	1120
85°	3539	1142	1097

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9803 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.7	1.8
10°-20°	214.7	5.2
20°-30°	317.0	7.7
30°-40°	364.8	8.8
40°-50°	354.0	8.6
50°-60°	298.3	7.2
60°-70°	223.0	5.4
70°-80°	154.0	3.7
80°-90°	108.9	2.6
90°-100°	108.6	2.6
100°-110°	162.0	3.9
110°-120°	234.8	5.7
120°-130°	302.6	7.3
130°-140°	341.8	8.3
140°-150°	337.7	8.2
150°-160°	285.6	6.9
160°-170°	190.2	4.6
170°-180°	66.5	1.6
0°-30°	607.4	14.7
0°-40°	972.2	23.5
0°-60°	1624.5	39.2
0°-90°	2110.4	51.0
90°-120°	505.4	12.2
90°-150°	1487.5	35.9
90°-180°	2030.0	49.0
0°-180°	4140.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	801	801	801	801	801	
5°	789	803	796	797	802	75
15°	755	767	760	763	768	212
25°	681	694	690	687	691	314
35°	580	592	586	578	578	364
45°	465	472	462	448	441	358
55°	343	350	336	317	310	307
65°	226	232	224	217	216	225
75°	122	128	146	159	163	131
85°	37	63	110	135	141	40
90°	9	47	97	124	133	8
95°	45	59	106	133	139	44
105°	121	124	154	177	181	129
115°	213	220	238	252	256	211
125°	316	326	340	352	355	283
135°	425	434	443	454	459	328
145°	530	537	540	544	550	331
155°	619	623	620	620	624	284
165°	676	678	673	671	676	190
175°	704	707	698	695	695	67
180°	702	702	702	702	702	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	801.2	801.2	801.2	801.2	801.2
2.5°	794.0	805.5	799.1	800.3	801.2
5°	788.8	803.2	795.6	796.8	802.3
7.5°	781.5	795.4	788.8	789.6	796.0
10°	775.2	788.5	781.6	783.2	788.8
12.5°	767.0	780.6	773.8	776.0	781.5
15°	754.8	767.3	760.1	762.9	768.4
17.5°	736.7	749.4	742.4	743.6	749.2
20°	723.1	734.9	730.7	730.0	735.6
22.5°	706.8	719.5	716.2	712.9	719.3
25°	681.3	693.8	690.3	687.0	691.4
27.5°	655.9	666.7	661.1	656.9	660.2
30°	636.0	647.4	640.9	636.1	639.4
32.5°	614.3	626.3	619.2	613.4	614.9
35°	580.5	591.6	586.2	578.3	578.3
37.5°	548.6	557.3	551.4	541.1	538.7
40°	525.1	534.6	527.0	514.8	511.5
42.5°	500.6	510.2	502.2	488.5	483.4
45°	465.1	471.7	462.5	448.0	441.3
47.5°	428.4	435.9	423.4	407.2	399.3
50°	404.0	411.7	398.3	380.0	371.2
52.5°	380.5	387.0	373.3	353.5	346.1
55°	342.9	350.2	336.5	316.7	309.6
57.5°	307.8	314.9	299.8	284.5	278.4
60°	285.2	291.4	276.8	263.1	257.5
62.5°	259.8	266.6	253.6	244.3	239.9
65°	226.3	231.8	223.6	217.4	215.5
67.5°	194.9	199.2	195.7	196.1	196.2
70°	173.1	177.5	179.0	183.4	184.1
72.5°	153.2	157.3	165.1	172.8	174.4
75°	122.2	128.1	146.1	159.2	162.8
77.5°	95.1	101.2	131.2	148.7	153.6
80°	77.0	87.2	123.0	143.2	148.7
82.5°	60.7	75.0	116.9	139.8	145.3
85°	37.3	62.6	110.0	134.8	141.3
87.5°	18.0	53.0	103.2	129.4	136.9
90°	8.6	47.1	97.4	124.5	132.9
92.5°	22.4	49.7	99.7	126.2	133.2
95°	44.9	59.1	106.5	133.2	138.7
97.5°	66.5	73.8	117.3	141.9	147.3
100°	81.4	86.1	126.2	149.9	155.0
102.5°	97.2	100.1	136.9	159.4	164.8
105°	120.9	124.5	154.1	176.6	181.0
107.5°	147.3	151.4	176.0	196.9	201.1
110°	164.9	171.0	192.4	211.2	215.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	184.6	190.7	209.7	226.7	231.4
115°	213.0	220.2	237.9	252.2	255.8
117.5°	242.7	250.9	266.9	279.9	283.4
120°	264.4	272.4	287.5	299.8	302.8
122.5°	284.1	293.0	308.4	320.7	323.6
125°	315.5	325.7	340.4	352.0	355.0
127.5°	347.7	358.0	371.6	383.4	387.2
130°	370.6	380.1	391.9	404.3	408.6
132.5°	391.5	401.0	411.9	424.6	429.5
135°	425.1	434.5	443.0	454.3	459.4
137.5°	457.4	466.6	473.1	482.0	488.4
140°	479.5	487.5	492.2	500.5	506.3
142.5°	499.8	507.8	511.3	518.4	524.2
145°	530.2	536.8	539.9	543.8	549.6
147.5°	558.7	565.1	566.4	569.8	573.5
150°	577.2	583.0	583.1	584.7	588.4
152.5°	594.5	599.7	598.1	599.1	603.3
155°	618.9	622.6	619.7	620.5	624.2
157.5°	638.3	642.0	637.4	638.8	641.8
160°	650.3	653.9	648.8	649.6	652.5
162.5°	661.6	664.1	659.5	658.6	662.6
165°	675.6	678.5	673.4	671.2	675.6
167.5°	687.5	690.5	683.7	681.4	685.8
170°	693.5	696.4	689.0	686.2	690.5
172.5°	698.9	701.8	693.8	690.3	693.5
175°	703.9	706.9	698.0	695.0	695.0
177.5°	705.4	707.2	700.7	697.8	701.3
180°	702.5	702.5	702.5	702.5	702.5

(END OF REPORT)